

of times on imported Cattleyas. Apparently the pest is of South American origin. The larvae are usually found in the roots and are quite destructive to the root tissue. As far as I know the pest has not become established here.

The bloom of certain orchids becomes an attractant of the melon fly (*Chaetodacus cucurbitae*), probably on account of the scent thrown off, as males of these flies seem to be drawn by odors. No damage to the plant results from the visits of the flies, as far as I have been able to learn.

THE SO-CALLED "CATTLEYA FLY"

There is still another common insect pest of Cattleyas which has been brought into Hawaii many times but as far as I know is not established here—that is the so-called "cattleya fly." This insect, however, is not dipterous; it is a small black eurytomid wasp (*Iso-soma orchidearum*), which is attached to the orchid plant, and is believed to emanate from South America. The larvae are phytophagous in habit and very harmful to plants which they infest. They attain a length of 6 mm., feed in the bulb, stems, leaves and buds of many kinds of orchids besides Cattleyas and can only be got rid of by the complete destruction of the infested portions of the plants, or possibly by vacuum fumigation.

New Species from the Bishop Museum Collection of Samoan Parasitic Hymenoptera

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(Presented at the meeting of November 4, 1937)

ICHNEUMONINAE

Ichneumon samoanus n. sp.

Female.—12 mm. long, wing expanse 20 mm. Head (including antennae) and thorax (including legs) reddish brown to black or blackish, abdomen reddish brown, pedicellate 1st segment slightly infusate, 2nd and 3rd tergites marked with black—a median longitudinal line on 2nd extending apically from base more than half the length, a median spot basally on 3rd; wings infumate.

Head transverse, only half as thick as wide, length from vertex to apex of clypeus equals or slightly exceeds width, coarsely punctate or rugose except on occiput which is smooth and shining with minute pin punctures, hairy clothing sparse and fine except on clypeus, labrum and parts of face; eyes large and bulging slightly, hardly emarginate, ocelli arranged in an obtuse triangle, lateral members a little further from eye than distance between same, vertex and face comparatively flat, front excavate, a slight median elevation or tubercle on anterior margin, separation of face and clypeus indistinct but clypeal fossae rather deep, anterior margin of clypeus barely curved, genae and occiput quite wide, latter sloping outwardly, mandibles stout, fairly wide at base and acute apically, bidentate, upper tooth twice as long as lower, maxillary palpi

5-segmented and slender, labial palpi 4-segmented, short and fairly stout. Antennae much shorter than body and fairly thick, 37-segmented, 1st segment stout, 2nd and 3rd equal in length which is about three times diameter, following segments progressively shorter except the last which is about twice penultimate. Abdomen a little longer than thorax, which is stout and coarsely reticulately sculptured or coarse punctate, prothoracic furrow wide and shallow, striate, mesonotum punctate without parapsidal grooves, mesopleura striate, a line of costae along posterior margin, a deep, smooth sulcus separating mesonotum and scutellum, which is keystone-shaped, subconvex, longitudinally striate and joined to mesonotum with sharply edged carinae; metanotum short, transverse, with a median, striated elevation and deep lateral grooves, the pleura with a carinate posterior margin connected with the propodeum by a pair of carinae which are continuous with its ends; propodeum somewhat globose, areolated in pattern shown in drawing, spiracle elongate



oval, posterior margin extended in a prominent projection between base of coxae and base of pedicel. Abdomen depressed to apex of 3rd segment, 4th and following segments more cylindrical tapering to a point, 1st tergite longer than width at apex with median strap-like longitudinal elevation, flat in front of angle and striate, 2nd tergite a little shorter than width at apex with a groove or depression in basal lateral area and short striae extending outwardly from basal margin, 3rd tergite nearly twice as wide as long with a small basolateral depression, tergites 4 to 7 progressively shorter and narrower; ensheathed ovipositor extended very little beyond tip of last segment. Legs fairly stout and covered with cinereous to silvery hairs most heavily outwardly, claws without teeth. Wings with lanceolate stigma and veins black, areolet complete, pentagonal, nervulus inclined to be postfurcal, subdiscoidal entering the discoidal below the middle, nervellus in hind wing broken by auxiliary vein one-fifth its length from lower end. In some specimens the abdomen is apically fuscous. Antennae in male with outer segments somewhat globose.

Described from four specimens (2 ♀ ♀ and 2 ♂ ♂, type, allotype and paratypes) collected at Safune and Salailua, Savaii, Samoan Islands, May 1st and 2nd, 1924, by E. H. Bryan, Jr.

PIMPLINAE

Echthromorpha samoana n. sp.*

Female.—10 mm. in length, wing expanse 22 mm., ovipositor 3.5 mm. long; antennae 33-segmented, nearly as long as the body, 4th segment not as

* While this issue of the "Proceedings" was in the press, our attention was called to R. A. Cushman's description of the above species in Proc. R. Ent. Soc. Lond. (B) 7, pt. 2 (Feb. 1938) p. 40. On account of earlier publication the species must be ascribed to Cushman, not Fullaway, and the typical material listed herein designated "co-types" instead of "type, allotype and paratype." [Editor].

long as the 5th and 6th together, remaining segments successively shorter to the penultimate, which is a little longer than broad, last segment twice as long as broad with flattened, rounded end. Head smooth, polished, face, clypeus, labrum and genae however displaying some very fine punctuation; pronotal sulcus striate, mesonotum, mesopleura (except disc and callosity), mesosternae and propodeum (except median apical and lateral basal areas) shallowly rugoso-punctate, thorax otherwise smooth and shining; a deep sulcus (bounded laterally by sharp ridges—extensions of the carinate mesonotal margination) between the mesonotum and scutellum, which is more finely and sparsely punctate and shining, postscutellum polished on disc, with deep lateral sulci, vestiture of fine silky hairs on all sculptured areas. Abdominal tergites for the most part smooth and shining with sparse, coarse, shallow punctuation on segments 2-6, that on 7 much finer, punctuation on 8th tergite deeper and closer, hairy vestiture inconspicuous except on last three segments, an apical band on segments 1-5, narrow medially but widening laterally, a shallow groove marking the anterior limit of the band on segments 2-5, which is continued inwardly to anterior margin of segment, 7th tergite with conspicuous median longitudinal groove, ovipositor with sheath finely, transversely sculptured and hairy; legs variously surfaced, smooth, reticulately sculptured or punctate and clothed for the most part with a fine pile, coxae, trochanters and femora with long hairs.

Reddish brown in color with yellow markings as follows: on face (including clypeus and labrum) and extending around antennal grooves and ocelli to narrow orbital band which connects with the genae, on mesopleura in front on disc and callosity, a spot in lower posterior angle, disc of scutellum and postscutellum; on propodeum two areas at or near apical margin on either side of middle, apical band of 1st to 4th tergites, all the coxae and fore and mid-trochanters, on mesonotum, tegulae and a faint longitudinal band on either side of the median black stripe, ovipositor and ocellar area black, antennae concolorous with body that is reddish brown with fine, short hairs in a linear arrangement; wings hyaline with suffusion of yellowish brown. Male a little smaller and slenderer, reddish brown but often without all the vivid yellow markings seen in the female.

Described from 13 females and 34 males collected in the Samoan Islands as follows: Type, Reservoir Fagatoga Trail, Tutuila, Am. Samoa, D. T. Fullaway, collector; allotype, same locality, collected in March 1930; paratypes: 3 females Aua-Afono Trail, Tutuila, collected by D. T. Fullaway, March 1930, 4 females, Fagasa Trail, Tutuila, same collector, Feb.-March, 1930, 1 female, Amouli, Tutuila, same collector, Feb. 1930, 1 female Pago Pago, Tutuila, collected by Swezey and Wilder, Sept. 29, 1923, 1 female Salailua, Savaii, collected by E. H. Bryan, Jr., May 19, 1924, 2 females Safune, Savaii, same collector, May 3, 1924, taken on *Raillardia* at 2000 ft., 8 males Aua-Afono Trail, Tutuila, Am. Samoa, collected by Fullaway in March of 1930, 3 males Fagasa Trail, same collector and date, 1 male Reservoir Trail, Fagatoga, Tutuila, same collector and date, 1 male Fagaitua Trail, Feb. 1930, 1 male Leone-Alaua Trail, March 1930, Fullaway collector, 1 male Tutuila, April 1918, Kellars collector, 1 male Fagasa, Tutuila, Sept. 9, 1923, Swezey and Wilder collectors, 2 males Afono Trail, Sept. 25, 1923, 1 male Pago Pago, Sept. 19, 1923, same collectors, 1 male Malololelei, Upolu, 7/8/25, 1 male same 4/26/24 on *Raillardia*

2-4000 ft. former collected by G. P. Wilder, the latter by E. H. Bryan, Jr., 4 males Safune, Savaii, collected by E. H. Bryan, Jr., May 23, 1924, in the rain forest and lower forest areas, 5 males Salailua, Savaii, same date and collector, in the rain forest area. Type, paratypes and allotype in collection of the B. P. Bishop Museum.

***Eugalta samoana* n. sp.**

Female.—10 mm. in length, wing expanse 21 mm., ovipositor 4.5 mm. long, antennae 36-segmented, as long as the body, with elevated bases separated by deep groove, scape and pedicel stout, flagellum filamentous, 1st segment at least six times as long as wide, following segments progressively shorter, penultimate segment twice as long as wide, last segment less. Head smooth, polished, face, clypeus and genae showing some fine punctuations where there is a hairy clothing, eyes large, bulging, bare, occupying the whole sides of the head, somewhat emarginate within, opposite base of the antennae, ocelli prominent, elevated, members separated by half their diameter, lateral members almost touching eye, front excavate, face flat, a little longer than wide, not separated from the clypeus except by clypeal pits and groove, anterior margin slightly rounded, genae very narrow, widening four times to join the flat occiput, which is declivous behind eyes, mandibles apparently bidentate, the upper tooth larger and longer than lower, maxillary palpi four-segmented, labial palpi three-segmented. Thorax smooth and shining throughout, prosternites advanced in front of pronotum and forming with it an extension or neck which joins the head in occipital cavity, pronotal sulcus broad, not carinate, mesonotum convex, without parapsidal furrows but with faintly indicated lobes, mesopleura slightly convex with deep grooves at front and hind margins, scutellum convex, separated from the mesonotum by a deep sulcus with carinate lateral margins, propodeum globose, separated from the metapleura by a longitudinal sulcus running alongside the round spiracle—a carina also runs the length of this sulcus to outer apical angle, then turns inward a short distance, then backward about as far. Abdomen depressed to apex of fifth segment, sixth and seventh segments more cylindrical and compressed, 1st segment three times as long as apically wide, 2nd, 3rd, and 4th longer than wide but less than twice as long, 5th quadrate, 6th, 7th and 8th much wider than long, the tergites extending on to the sides considerably, tergites 2, 3 and 4 with deep lateral impressions extending inwardly forwards and backwards from about middle of segment, tergites 3-8 with hairy clothing, which is thicker on apical tergites, all the abdominal spiracles well forward of the middle of the segments. Legs fairly long and stout, hind legs longer than fore or middle legs, coxae stout, tibiae longer than femora, tarsi about same length, all clothed with hairs, last tarsal segment much longer than penultimate, claws lobate beneath but without tooth. Wings with narrow lanceolate stigma, second recurrent nervure joining cubitus beyond cubital cross-vein, without an areolet, 1st recurrent nervure broken below middle, nervellus in hind wing unbroken, no auxiliary vein.

Head, pro- and mesothorax and apical abdominal segments yellowish brown or amber, metathorax, middle and hind legs to tibiae and basal abdominal segments mahogany brown, legs outwardly reddish brown, wings infumate, stigma and veins dark brown.

Described from one female (type) collected on Savaii, Samoan Islands, at Safune (rain forest 2000 ft.), May 3rd, 1924, by E. H. Bryan, Jr.